

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1, 3-10, 12-21, 23, 25-28, 30 and 32-34 were pending and rejected. In this response, claims 9 and 18 have been canceled without prejudice. Claims 1, 10, 19, 20, 26 and 33 have been amended to particularly point out and distinctly claim, in full, clear, concise, and exact terms, the subject matter which Applicant regards as his invention. No claims have been added. Thus, claims 1, 3-9, 12-17, 19-21, 23, 25-28, 30 and 32-34 remain pending. No new matter has been added.

Claims 1, 3-10, 12-21, 23, 25-28, 30 and 32-34 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0047517 to Christopoulos, et al. ("Christopoulos") in view of ISO/IEC JTC 1/SC 29/WG 1 N1646 ("JPEG 2000 IMAGE CODING SYSTEM", ISO/IEC JTC 1/SC 29WG 1, JPEG 2000, 16 March 2000, (hereafter referred to as N1646)).

Applicant respectfully disagrees. Claim 1 as amended is as follows:

1. A system comprising:
 - a memory storing a compressed image as a codestream in a first JPEG 2000 progression order;
 - a progression order conversion parser to convert the codestream from the first progression order to a second JPEG 2000 progression order different than the first progression order, without decoding the codestream, by reading one or more markers of the codestream to determine a current type of progression, the one or more markers further indicating one or more data operations to be performed on the codestream during the progression order conversion, updating the one or more markers to specify a target type of progression, and outputting packets of the codestream in an order conforming to the second progression order indicated by the updated one or more markers,
 - wherein the parser converts the codestream from the first progression order to an intermediate progression order and from the intermediate progression order to the second progression order, and
 - wherein the intermediate progression order is a layer progression order and the second progression order is a target progression order other than the layer progression order.

As set forth above, Claim 1 requires a progressive order conversion parser to convert a codestream from progression order to another, without decoding the codestream, based on information derived from one or more of the markers embedded within the codestream, where the marker(s) also indicate one or more operations being formed on the codestream during the progression order conversion. The progression order is converted from one progression order to an intermediate progression order and then from an intermediate progression order to a target progression order. More specifically, the intermediate progression order is the layer progression order and the target progression order is another one of the progression orders. Applicant respectfully submits that these features are not shown in Christopoulos and N1646.

Christopoulos discloses a transcoding scheme on multimedia data that is being transferred between two network elements. Christopoulos defines the transcoder, in paragraph 14, as a device which accepts and receives data stream encoded according to the first coding format and outputs the encoded data stream encoded according to a second encoding format. Applicant respectfully submits that such a transcoder does not operate as a progression order conversion. More specifically, the generation of the different coding format is described in Christopoulos as a conversion between two formats associated with two different standards. Such as, for example, converting the video signal from the H.261 Standard to the H.263 Standard. The present invention deals with a JPEG 2000 progression order conversion which converts from one of the JPEG 2000 progression orders to another. Christopoulos does not disclose any progression order conversions. Therefore, Applicant respectfully submits that one would not look to Christopoulos.

The Examiner cites N1646 for teaching the JPEG 2000 method. The Examiner cites a variety of sections of the JPEG 2000 Standard, including the section that sets forth the five JPEG 2000 progression orders that a codestream may be in. However, there is no place in this

section that specifies a conversion from one compressive order to another without decoding the codestream. The Applicant sets forth that codestreams may be put into different orders when they are created. That is, there is nothing in the JPEG 2000 Standard that requires that a codestream can be put in a first progression order always and then be converted into another progression order. This is not part of the Standard. Thus, any one of the five progression orders may be used when creating the encoded codestream at the time of creation.

Furthermore, the Examiner sets forth the POD marker disclosed in N1646. The POD marker sets forth a progression order change. However, this marker only indicates when the progressive order is other than the default in the codestream. It does not indicate when the progression order has been changed from a progression order the codestream was previously in. This marker can be used to indicate that the codestream has become created in a progression order that is different than the default progression order. This is significant in that one could change progression orders by decoding a codestream and then re-encoding it and placing it in a different progression order. This is different than the present invention, which converts the codestream into a different progression order without decoding. Therefore, Applicant respectfully submits that the combination of Christopoulos and N1646 does not disclose converting a codestream from one progression order to another JPEG 2000 progression order without decoding the codestream as set forth by the present invention as claimed. In view of this, Applicant respectfully submits that the present invention as claimed is not obvious in view of the combination of Christopoulos and N1646.

Furthermore, the present invention as claimed includes a marker specifying one or more operations being performed on the codestream during progression order conversion. Applicant respectfully submits this feature is not shown in Christopoulos or N1646. The Examiner believes that the Christopoulos' disclosure hints meets this limitation. However,

the transcoder hints set forth in Christopoulos are used by the transcoder to reformat the multimedia data in accordance with client capabilities, user preferences, link characteristics and/or network characteristics. None of these hints that are disclosed in Christopoulos are used in the specified operations to be performed in a progression order conversion. In view of this, Applicant respectfully submits that the present invention is not obvious in view of Christopoulos and N1646.

With respect to Claim 5, the present invention as claimed sets forth that the parser determines where packets exist in the codestream based on at least one marker, creates a structure specifying component in each packet, and reorders packets in the codestream using the structure to map the first the progression to the second progression order. The Examiner believes this is shown in sections B.11.1 and pages 68-69 of N1646. Applicant respectfully disagrees. Section B.11.1 sets forth the five permissible progression orders. There is no discussion of reordering the progression orders at all in this section. It is silent with respect to reordering. Furthermore, there is no structure specifying components in each packet that is used to reorder the packets when mapping one progression order to another progression order. Again, the section merely discloses the five permissible JPEG 2000 progression orders. In view of this, Applicant respectfully submits that Claim 5 is not obvious in view of the combination of Christopoulos and N1646.

With respect to Claims 26 and 33, the present invention as claimed sets forth that the operations specified in the markers operate based on rate distortion information provided in PLT/PPM and PPT/PPM marker sets. The Examiner believes this is shown in the JPEG 2000 spec and references pages 45-48 in N1646. However, the section referenced by the Examiner is merely a discussion of PLT/PPM and PPT/PPM marker sets and their definitions. Both sections of N1646 do not disclose anything about progression order conversions, nor the use

of information in those particular marker sets to control progression order conversions. In view of this, Applicant respectfully submits that the present invention is not obvious in view of Christopoulos and N1646

In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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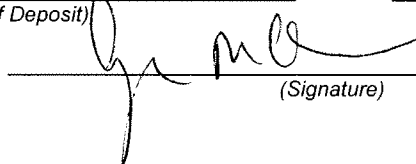
I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below.

January 22, 2008

(Date of Deposit)

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